

## ABSTRACT

### CLIENT-SERVER COMPUTING SOFTWARE ARCHITECTURE

5       The invention relates to software architecture for client-server systems and the execution of service requests. On the client, the presentation (UI) layer 100 presents a user with a graphical user interface. The service request can be such as 'Find Customer', which seeks to extract a customer's details. The application (process) layer 102 deals with the specific 'service requests'. The middleware (SRB) layer 104 deals with the framing and dispatching of service requests as bit streams. On the server, a similar, but not identical middleware (SRB) layer 106 receives bit streams and recreates service requests therefrom. The server SRB 106 communicates with the server application (process) layer 108 where the recreated service requests are executed. The application layer 108 has communication with a database 40 to persist or retrieve data stored therein relating to any service requests. In response to a service request on the client, the methodology involves firstly the instantiation of one or more Business Objects (BOs) on the client. The BO is populated with any needed attributes. A Service Object (SO) is instantiated on the client, and populating (i.e. associating) the SO with one or more BOs. The SO is called, and passed to the server as a binary stream. The SO and associated BO(s) are then reinstantiated on the server, whereafter the service is executed. The SO is then populated with the results of the executed service, and the resultant SO passed back to the client. The returned BO attributes are updated on the client.

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